



Crestone Peak Resources Operating

Lochbuie Land 2B-25H-D166

API # 05-123-47983

Surface

01/04/2019

Quote #: 24290

Execution #: 14539



Crestone Peak Resources Operating

Attention: Mr. Jerry Thorstad | (303) 829-8179 | Jerry.Thorstad@Crestonepr.com

Crestone Peak Resources Operating | 10188 E I25 Frontage Rd. | Firestone, CO. 80504

Dear Mr. Jerry Thorstad,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,
Jason Creel
Field Engineer I | (307) 256-0306 | Jason.Creel@bjservices.com

Field Office 1716 East Allison Rd., Cheyenne WY, 82007
Phone: (307) 638-5585

Sales Office 999 18th St. Suite 1200 Denver, CO 80202
Phone: (281) 408-2361

BJ Cementing Treatment Report

SERVICE SUPERVISOR	Hector Montoya	SERVICE	Cementing
CLIENT FIELD REPRESENTATIVE	Crestone	COUNTY	WELD
DISTRICT	Cheyenne, WY	STATE / PROVINCE	CO

WELL GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lb/ft)	MD (ft)	TVD (ft)	EXCESS (%)
Casing	9.63	8.84	40.00	2,363.00	2,350.00	
Open Hole	0.00	13.50	0.00	2,378.00	2,365.00	25.00

HARDWARE

Top Plug Used?	Yes	Landing Collar Depth (ft)	2,320
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3520.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2860.00
Centralizers Used	Yes	Job Pumped Through	Manifold
Centralizers Quantity	55.00	Top Connection Thread	LTC
Centralizers Type	Bow	Top Connection Size	9.625

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Mud Density In (ppg)	8.90
Circulation Prior to Job	Yes	Mud Density Out (ppg)	8.90
Circulation Time (min)	30.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	150.00	Flare Prior to / during the Cement Job	No
Lost Circulation Prior to Cement Job	No	Gas Present	No

TEMPERATURE

Ambient Temperature (°F)	33.00	Slurry Cement Temperature (°F)	61.00
Mix Water Temperature (°F)	60.00	Flow Line Temperature (°F)	55.00

FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H ₂ O REQ (gals/sk)	VOL (sk)	VOL (Cu Ft)	VOL (bbls)
Tail Slurry	S100.3.XC	14.2000	1.4614	7.34	999	1459.0000	259.8000
Displacement Final	Displacement	8.3337				0.0000	177.0000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
Tail Slurry	S100.3.XC	CEMENT, ASTM TYPE III	100.0000	PCT

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	55.00
Calculated Displacement Vol (bbls)	177.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	177.00	Amt of Spacer to Surface	20.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amt Bled Back After Job	1.00
Bump Plug Pressure (psi)	1300.00	Total Volume Pumped (bbls)	460.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement Returns During Job	Full	Lost Circulation During Cement Job	No

BJ Cementing Event Log

Surface - [Cheyenne, WY](#) - [Hector Montoya](#)

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	01/04/2019 04:30	Callout					BJ Crew gets called out
2	01/04/2019 08:30	Arrive on Location					BJ Crew safely arrives on location
3	01/04/2019 09:00	STEACS Briefing					BJ Crew talks about the hazards of spotting equipment and rigging up
4	01/04/2019 09:30	Rig Up					Rig Up
5	01/04/2019 13:00	STEACS Briefing					BJ Crew and Rig Crew talk about the hazards of pumping their job
6	01/04/2019 13:27	Prime Up	8.3300	3.00	3.00	100.00	Fill Lines
7	01/04/2019 13:30	Pressure Test					Pressure Test to 3000psi
8	01/04/2019 13:33	Pump Spacer	8.3300	3.00	20.00	130.00	Pump 20bbl water with Flake
9	01/04/2019 13:43	Pump Tail Cement	14.2000	5.00	266.00	240.00	Pump 260bbl Tail cement at 14.2ppg, 1005sks of S100.3.XC, yield 1.46, 7.34gps, 175bbl mix water
10	01/04/2019 14:46	Drop Top Plug					Customer witnesses top plug leave
11	01/04/2019 14:47	Pump Displacement	8.3300	7.00	167.00	900.00	Pump a total of 177bbl Fresh Water Displacement
12	01/04/2019 15:18	Cement Back-to-Surface					55bbl to surface
13	01/04/2019 15:19	Pump Displacement	8.3300	3.00	10.00	1300.00	Slow rate 10bbl to land plug
14	01/04/2019 15:22	Land Plug				1300.00	Plug lands, final circulating pressure was 790psi took to 1300psi
15	01/04/2019 15:27	Check Floats					Floats held, 1bbl back
16	01/04/2019 15:28	STEACS Briefing					BJ Crew talks about the hazards of rigging down
17	01/04/2019 15:40	Rig Down					Rig Down
18	01/04/2019 16:30	Leave Location					BJ Crew departs location

CRESTONE
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